

International Combined Heat and Power Conference

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Delivering Environmental Objectives - at a Profit

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OUTLINE:

- Frame the message - *External changes and effects on our industry require us to change the way we approach our business in order to remain successful into the 21st century:*
 - Energy industry undergoing significant change (regulated to competitive with different regulations)
 - customer's needs are changing: Computer/internet revolution have created more sophisticated customers who require higher level of reliability and power quality along with more involvement in how we serve their energy needs; customers expecting more on environment
 - Environmental regulations changing - require stricter performance, lower emissions

- General public is becoming more involved in public policy and business decision-making. (Evidenced by use of internet to organize and communicate regarding major transmission and pipeline projects.) NIMBY - BANANA
- Within this change, we as business leaders are still required to meet business objectives -
 - operate profitably,
 - maintain shareholder value,
 - enhance the value of the corporation,
 - grow the corporation,
 - and provide customers with a reliable, competitively priced energy product that meets their needs while anticipating changing needs.
- The best way for us to simultaneously meet business, environmental, customer and public responsiveness goals is to take a more creative approach to energy supply. To be successful, we must view our business as customers and as competitors would, and create solutions that meet their needs as well as our requirements as energy suppliers...and with a green focus.
- At WE, our focus is on several key solutions.

- We are improving operating efficiency and environmental performance of currently operating generating units. One means of improving efficiency is to pursue the use of combined heat and power applications.
- Working with the state and federal regulatory agencies to craft regulations that achieve environmental goals, allow our business to remain profitable, and support competitively priced energy which will satisfy our pledge to our shareholders and to our customers;
- Bringing new, diverse generation and supply resources to market fruition positions us to be more energy self-sufficient by diversifying the energy mix. The generation we are targeting includes renewable generation resources, newer, more efficient technologies, and distributed generation, such as fuel cells, microturbines and other viable technologies.
- Our commitment to improving the energy delivery infrastructure in a cost effective manner will be impacted by changing generation technology. Distributed generation is likely to bring with it a rethinking of the distribution infrastructure and we need to be prepared to incorporate this into our planning. In the future we may

choose to add distributed generation rather than adding new distribution lines.

- Implementing beneficial reuse of waste materials reduces waste products, thus helping to reduce environmental and cost related issues for both our customers and ourselves. We're challenging ourselves to reduce landfill and waste with more creative thinking.
- Working more closely with customers allows us to identify opportunities, especially for combined heat and power, and distributed generation installations. These can improve reliability, power quality service for our customers, and avoid the environmental and societal impacts of new distribution line construction.
- The challenge is to accomplish these creative approaches while remaining financially profitable and use the new approaches to grow the company.
- Minergy is a WEC company that produces glass aggregate for use in the construction industry. Minergy has a process for recycling foundry sand and also has a process that combines fly ash with paper mill or sewage sludge to produce light-weight aggregate. This is a specialty construction product for lightweight concrete. WE owns and operates a light-weight aggregate facility at our OCPP.

- Wisconsin Electric has successfully accomplished and has begun to implement other creative solutions to efficiency and environmental goals.
 - We have developed several beneficial reuses for ash:
 - Class C fly ash from burning western sub-bituminous coal is used as a cement replacement in concrete
 - Fly ash is used as a raw feed product in cement manufacture
 - Bottom ash is used as a sub-grade for buildings, parking lots and road construction.
 - Future plans include using fly ash as a sub-grade for airport runway expansion and as a supplemental fuel source for the PPPP.
 - We have installed two demonstration wind turbines in Wisconsin. Our goal is to help demonstrate the applicability of wind generation in Wisconsin and to understand the operation of wind machines as a generation resource. We have also contracted to construct a wind farm.
 - We operate one of the largest and most successful renewable energy programs for our customers, energy for tomorrow TM. Currently over

11,000 residential and commercial customers participate in the program.

- Our Wilderness Shores Settlement Agreement protects the market-based economic viability of our hydroelectric system for the next 40 years while providing environmental improvements and enhancements. This nationally recognized settlement agreement resulted from a cooperative approach among state and federal agencies, public stakeholder groups and the company to resolve a multitude of issues.
- We have added chillers to our combustion turbines to improve efficiency and increase power production.
- We have worked with customers to combine power production with the use of waste heat for process use. The oldest example is our Valley Power Plant, which was installed in the late 1960's to provide steam heat and process steam to downtown Milwaukee businesses while generating electricity. We expanded the steam service by purchasing a plant west of downtown that supplies steam and chilled water to Milwaukee County Hospital buildings.

- We have worked with landfill operators to add generation, using the methane produced by these landfills that was previously simply burned off.
- We have just embarked on a program to facilitate the use of distributed generation products for our system and by our customers. Some of the important issues that need to be addressed include interconnection and tariffs. We need to strive for national interconnection standards to ensure consistent safety and equipment connection requirements, removing one barrier to development. Tariffs need to ensure that current and future capital investment in energy distribution system are recovered, and are fair to all customers.
- Through these new products and a better understanding of our customers' needs, we have been able to meet customer needs and improve the environment. The results are reduced costs for us and for our customers, and a profitable operation.
- Societal benefits that result from these products focus mainly on job creation. New construction and plant upgrades result in construction jobs. New product development, and the increased acceptance of new and diverse generation resources result in more, higher paying

technology based jobs. We are already reaping the benefits of wider acceptance of renewable resources. Wind turbine manufacturers have opened manufacturing and service centers close to wind installations in the Midwest.

- Reducing our impact on the environment and providing our customers with competitively priced products and services that they desire and need are key to our profitable success in the 21st century.